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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| EXAMINER |
|---|
| WAI, ERIC CHARLES |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2195 | |

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| 10/31/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/768,303 | LEONARD ET AL. |
| | **Examiner** | **Art Unit** | |
| | Eric C. Wai | 2195 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>29 January 2004</u>.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>*1-33*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-33*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>29 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :5/21/2004, 11/29/2004, 04/14/2005, 09/06/2005, 09/29/2005, 01/10/2006, 04/27/2006, 08/28/2006, 09/25/2006, 07/19/2007, 07/25/2007, 09/18/2007.

## DETAILED ACTION

1.      Claims 1-33 are presented for examination.

### *Information Disclosure Statement*

2.      The information disclosure statements filed 10/04/2004 has not been considered

by the examiner. The information cited is "related applications. Applicant should place

this information in the "related applications" section of the specification for consideration

by the Examiner. Correction is required.

### *Claim Rejections - 35 USC § 101*

3.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

4.      Claims 12-22 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The claims are directed to a signal directly or

indirectly by claiming a medium and the Specification recites evidence where the

computer readable medium is define as a "wave" (such as a carrier wave). In that event,

the claims are directed to a form of energy which at present the office feels does not fall

into a category of invention. The following link on the World Wide Web is for the United

States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.

pdf>

5.      Claims 23-33 recite an "apparatus"; however, it appears that the apparatus would

reasonably be interpreted by one of ordinary skill in the art as software, per se, failing to

be tangibly embodied or include any recited <u>hardware</u> as part of the system.


## *Claim Rejections - 35 USC § 102*

6.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty. defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.      Claims 1-4, 7-8, 12-15, 18-19, 23-26, and 29-30 rejected under 35 U.S.C. 102(e)

as being anticipated by Armstrong et al. (US PG Pub No. US 2002/0156824 A1

hereinafter Armstrong).

8.      Armstrong was disclosed in IDS dated 9/29/2005.


9.      Regarding claim 1, Armstrong teaches a machine-implemented method,

comprising:

establishing, within a global operating system environment provided by an operating system, a particular non-global partition which serves to isolate processes running within the particular non-global partition from other non-global partitions within the global operating system environment ([0008]);

associating the particular non-global partition with a first resource pool comprising one or more resources ([0012]); and

ensuring that processes running within the particular non-global partition are allowed to utilize only the resources in the first resource pool ([0011], wherein each logical partition is constrained to execute in an assigned processor set).

10.     Regarding claim 2, Armstrong teaches that the first resource pool comprises one or more processors ([0010]).

11.     Regarding claim 3, Armstrong teaches that ensuring comprises: assigning work from processes running within the particular non-global partition to only the one or more processors in the first resource pool ([0011], wherein each logical partition is constrained to execute in an assigned processor set).

12.     Regarding claim 4, Armstrong teaches that the first resource pool comprises an indication of a maximum amount of memory that can be consumed ([0023]).

13.    Regarding claim 7, Armstrong teaches that the operating system is executed on

a computer system, and wherein the resources in the first resource pool are just a

subset of a total set of resources available on the computer system ([0011-0012]).

14.    Regarding claim 8, Armstrong Teaches that ensuring comprises: associating

each process running within the particular non-global partition with the first resource

pool ([0011], wherein each logical partition is constrained to execute in an assigned

processor set).

15.    Regarding claims 12-15, 18-19, 23-26, and 29-30, they are the machine-readable

medium and apparatus claims of claims 1-4, and 7-8 above. Therefore, they are

rejected for the same reasons as claims 1-4, and 7-8 above.

### Claim Rejections - 35 USC § 103

16.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

17.    Claims 5-6, 9-11, 16-17, 20-22, 27-28, and 31-33 rejected under 35 U.S.C.

103(a) as being unpatentable over Armstrong et al. (US PG Pub No. US 2002/0156824

A1).

18.     Regarding claim 5, Armstrong does not explicitly teach that ensuring comprises:

receiving, from a particular process running within the particular non-global

partition, a memory allocation request; determining whether granting the memory

allocation request would cause the maximum amount of memory that can be consumed

to be exceeded;  and in response to a determination that granting the memory allocation

request would not cause the maximum amount of memory that can be consumed to be

exceeded, granting the memory allocation request.

19.     However, it is old and well known that operating system manage memory

allocation requests and grant them accordingly. It would have been obvious to one of

ordinary skill in the art to modify Armstrong to explicitly teach memory management.


20.     Regarding claim 6, Armstrong does not explicitly teach ensuring further

comprises: in response to a determination that granting the memory allocation request

would cause the maximum amount of memory that can be consumed to be exceeded,

deallocating sufficient memory from one or more other processes to enable the memory

allocation request to be granted without causing the maximum amount of memory that

can be consumed to be exceeded; and granting the memory allocation request.

21.     Armstrong does teach that a separate OS manages each partition ([0035]). It is

old and well known that OS can reallocation resources to ensure the efficient

management of resources such as when a high priority process has an urgent

processing target that needs to be met. It would have been obvious to one of ordinary

skill in the art at the time of the invention to deallocate sufficient memory from one or

more other processes to enable the memory allocation request to be granted without

causing the maximum amount of memory that can be consumed to be exceeded and

granting the memory allocation request. One would be motivated by the desire to

ensure that high priority requests are granted.

22.    Regarding claim 9, Armstrong does not explicitly teach: receiving an indication

that the particular non-global partition is to be associated with a second resource pool

instead of the first resource pool, wherein the second resource pool is different from the

first resource pool, and wherein the second resource pool comprises one or more

resources; associating the particular non-global partition with the second resource pool

instead of the first resource pool; and ensuring that processes running within the

particular non-global partition are allowed to utilize only the resources in the second

resource pool.

23.    Armstrong does teach that resources can be reallocated to partitions depending

on changing needs ([0009-0010]). It would have been obvious to one of ordinary skill in

the art at the time of the invention to include modifying the resource pools. One would

be motivated by the desire to dynamically reallocate resources to improve system

performance as indicated by Armstrong.

24.    Regarding claim 10, Armstrong teaches that ensuring that processes running

within the particular non-global partition are allowed to utilize only the resources in the

second resource pool comprises: associating each process running within the particular

non-global partition with the second resource pool instead of the first resource pool

([0011], wherein each logical partition is constrained to execute in an assigned

processor set).


25.     Regarding claim 11, Armstrong does not explicitly teach that the operating

system executes on a computer system, and wherein the method further comprises:

receiving, from a particular process running within the particular non-global partition, a

request for information pertaining to all resources; and providing, to the particular

process, information pertaining only to the one or more resources in the first resource

pool, even though the computer system comprises other resources.

26.     Armstrong teaches that each partition is completely separated from each other

([0034]). It would have been obvious to one of ordinary skill in the art at the time of the

invention to provide information pertaining only to the one or more resources in the first

resource pool, even though the computer system comprises other resources. One

would be motivated by the desire to enforce isolation of partitions as indicated by

Armstrong ([0034]).


27.     Regarding claims 16-17, 20-22, 27-28, and 31-33, they are the machine-readable

medium and apparatus claims of claims 5-6, and 9-11 above. Therefore, they are

rejected for the same reasons as claims 5-6, and 9-11 above.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012.

The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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